



GREEN BUILDING POLICIES: STATE OF THE ART OVERVIEW

Prepared for the Mayor's Green Building Task Force

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The Green Roundtable

PRESENTATION OVERVIEW

- **NATIONAL GREEN BUILDING PROGRAM OVERVIEW**
- **CASE STUDY HIGHLIGHTS OF SUCCESSFUL PROGRAMS**
- **TRANSFERRABLE STRATEGIES : LESSONS LEARNED**

NATIONAL GREEN BUILDING PROGRAM OVERVIEW

50 + PROGRAMS ACROSS THE COUNTRY

WEST COAST + TEXAS, COLORADO, CHICAGO, MISSOURI,
PENNSYLVANIA

EAST COAST LACKING COMPREHENSIVE PROGRAM

STATE, COUNTY, AND CITY EFFORTS

RESIDENTIAL, COMMERCIAL, BOTH

PRIVATE PUBLIC PARTNERSHIPS

REQUIRING LEED

CASE STUDIES

- SEATTLE
- PORTLAND
- AUSTIN



SEATTLE

DEPARTMENT: Department of Design, Construction and Land Use

SECTOR: Municipal and Private

YEAR STARTED: 2000

CONTACT: Department of Design, Construction and Land Use

700 Fifth Avenue, Suite 2000

Seattle, WA 98104-5070

206-684-8850

Website: www.cityofseattle.net/sustainablebuilding/

HISTORY: The City's Sustainable Building Action Plan of April 1998 initiated a Sustainable Building Policy and Capital Improvement Project Supplements, leading to the development of the Seattle Sustainable Building program.

STRUCTURE: The Green Building Program is administered by the City of Seattle and is run by a Green Team with members from Seattle City Light, Seattle Public Utilities, the Facilities Division of the Executive Services Department, the Department of Design, Construction, and Land Use, the Office of Environmental Management and the Lighting Design Lab.

RATING SYSTEM: The Sustainable Building Policy requires all municipal new construction and renovations over 5,000 square feet to meet the LEED Silver standard. The city's Capital Improvement Project (CIP) supplement to LEED provides information and resources on applying LEED in the Seattle area.

The city's Fleets and Facilities Department has also recently developed Facility Standards for Design, Construction, and Operations which act as guidelines for city buildings and includes several additional green building standards.



SEATTLE

PRODUCTS AND SERVICES: Publications: Environmental Program Manual (City's environmental policies), a Sustainable Building Library, and resources on funding sources.

FUNDING: Seattle City Light and Seattle Public Utilities have combined funding to offer incentives to projects that integrate green building features early in the design process. Solicitations are competitive and grants are given for up to \$15,000 for projects that meet LEED certified or more than \$15,000 for projects that meet LEED Silver.

The Program also offers information on other green building funding sources in the Seattle area.

LEGISLATIVE INITIATIVES: The City's Sustainable Building Policy requires all municipal building projects over 50,000 ft to meet the LEED Silver standard. Further codes that apply to city buildings include the Energy and Water Conservation Policy and the Landscape and Grounds Maintenance Policy and Guidelines. There are also a number of environmental codes and requirements for all buildings including the Stormwater, Grading and Drainage Control Code and the Seattle Energy Code. A Sustainable Wood and Wood Products Resolution is currently in development.



SEATTLE

Private Sector Incentives

Offers incentives and assistance to Seattle businesses and residents to conserve resources (water, energy, and materials), protect habitat, build community and save on utility bills; and

Built Green: Seattle area residential architects, builders, developers, remodelers, project teams, and homeowners are invited to participate in Built Green™ Seattle, a design competition intended to encourage the development of residential green building projects.

Selected projects will receive financial and technical assistance, facilitated permit processing, public recognition, and marketing support for their team and project. The competition aims to:

Communicate the benefits of green homes to builders, consumers, and real estate professionals.

Demonstrate that green homes can be cost-competitive.

Create a market advantage for green architects, builders, and developers.



SEATTLE

- ❖ **Built Green Multi-Family Incentive Program:** As an environmental benchmarking tool for low- to mid-rise multi-family projects, the City recommends the use of the Built Green™ Multi-Family certification, developed by the Master Builder's Association of King and Snohomish Counties (MBA).

■ Funding

- ❖ Funded by Seattle City Light and Seattle Public Utilities, the Built Green™ Incentive Program provides financial assistance to building owners and developers to incorporate meaningful and cost-effective sustainable building goals **early in building programming and design decisions**. As part of this program, the City will be an active observer, to help determine what the most effective sustainable building services are that the City can offer to the private sector.

■ Aspects

- **Water:** Resource Efficient Clothes Washer Rebate: Greater Seattle area residents may qualify for a rebate when purchasing a resource efficient clothes washer.

■ Materials:

- * Northwest Natural Yard Days - Buy a discounted yard waste composter, compost, safer pesticides and fertilizers, and other natural lawn and garden products at this annual event for Seattle/King County area residents. This is an annual event.
- * Incentives for Historic Properties: Seattle's Department of Neighborhoods can help projects that utilize historic properties in Seattle access information on building and zoning code relief and other incentives.
- * Apartment Recycling Training: Seattle Public Utilities offers a \$100 rebate off an apartment building's garbage bill if there is a volunteer who will act as the recycling monitor. To qualify for the refund, the volunteer attends a training class provided by the City's *Friends of Recycling* program. Recycling services are free to apartments.



SEATTLE

- Seattle's Department of Neighborhoods Neighborhood Matching Fund
- Program provides over \$3 million a year to neighborhood groups, businesses and individuals for a variety of neighborhood improvement projects. Neighborhood- and community-based organizations and ad-hoc neighborhood groups are eligible to apply. Types of projects include neighborhood physical improvements as well as non-physical improvements, and community organizing.
- Large Projects Fund (projects that request more than \$15,000, up to \$100,000, and can be completed within a 12-month timeframe)
- Small and Simple Projects Fund (for projects seeking awards of \$15,000 or less and can be completed in 6 months or less)
- Tree Fund (neighborhood groups can apply for 10 to 40 trees for planting along residential planting strips)
- Neighborhood Outreach and Development Fund (makes awards for projects that involve new people in neighborhood organizations or activities)



SEATTLE

■ Community Planning/Transportation:

- * Location Efficient Mortgages for Homebuyers: You can actually qualify for a larger loan amount if you select a home in an area that reduces your need to use a vehicle. This program benefits virtually anyone looking to buy within the City limits of Seattle.
- * Grant Central Station: can award as much as \$5,000 to fund community projects that reduce waste, protect clean water, remove litter and graffiti, improve public spaces, or involve youth in environmental issues.
- * Way to Go, Seattle!: Receive a challenge grant to reduce car commute trips in your neighborhood by encouraging non-automobile forms of travel. creating vibrant and resource efficient communities, including reducing impacts associated with autos.



PORTLAND

- **NAME OF PROGRAM:** G/Rated: Green Rated
- **DEPARTMENT:** Portland's Office of Sustainable Development's (OSD) Green Building Division
- **SECTOR:** Private
- **YEAR STARTED:** 1999
- **CONTACT:** The City of Portland Office of Sustainable Development
 - G/Rated - The Green Building Division
 - The Jean Vollum Natural Capital Center
 - 721 NW 9th Avenue, Suite 350
 - Portland, Oregon 97209
 - PHONE: 503.823.7725
 - FAX: 503.823.5311
 - EMAIL: greenrated@ci.portland.or.us
- **WEBSITE:** www.green-rated.org/g Rated/grated.html



PORTLAND

➤ HISTORY

- Created in partnership with the Sustainable Development Commission and the input of over 160 local developers, architects, engineers, affordable housing providers, advocacy groups, and city employees. Funding comes from residential solid waste and recycling franchise fee increase of 1.55%. Program is administered by the City's Office of Sustainable Development. LEED is used in conjunction with local standards.

➤ GOALS

- The effort has two fundamental goals.
- 1) To expand market demand by educating building industry professionals and the public about the benefits of green building.
- 2) To make green building practices easier to implement by reducing regulatory and financial barriers while developing technical services and resources for building industry professionals.

➤ PROGRAM SERVICES

- G/Rated services and resources include:
 - - Personalized technical assistance
 - - Web-based resource and research center
 - - Best practices, specifications and resource guides
 - - On-line green products and services directory
 - - Financial incentives
 - - Case studies and technical briefs



PORTLAND

- **Incentives:**
- **Residential energy tax rebate program**
- **Neighborhood Housing Program Loan:** Products include the Fannie Mae HomeStyle Refinance/Rehabilitation Loan Program; Shared Appreciation Mortgage Program; Residential Loan Program; Residential Loan Program with Shared Appreciation Mortgage (SAM); Lead Hazard Reduction in the Home Repair Program
- Home Performance Power mortgages have low or no down payment requirements and require borrowers to contribute only 3 percent for closing costs, which may come from a variety of sources. Eligible borrowers can also add the dollar value of projected energy savings to their income, thus qualifying for a larger mortgage.
- G-Rated Residential: up to \$3000 for green renovations to existing homes
- G-Rated Commercial: 2 tracks: Innovation track offering up to \$5,000 and LEED track offering up to \$15,000 for Certified and \$20,000 for silver rated buildings.



PORTLAND

■ Sustainable Building Tax Credit

- LEED-certified Silver, Gold and Platinum building are eligible for a Sustainable Building Tax Credit. A pre-certification application is required and will be reviewed by staff and approved with a specific tax amount, based on the LEED rating sought. Tax credits are only available in the year the project is substantially completed. Eligibility is determined after the LEED Certification (at Silver or higher) is received. Credit will be calculated on gross square footage (gsf) of all conditioned spaces.

- Incentive matrix (per gsf):

- Building Size - - - - Silver - - - Gold - - - Platinum

- First 10,000 gsf - - - \$5.71 - - - \$9.29 - - \$14.29

- Next 40,000 gsf - - - \$3.57 - - - \$4.29 - - \$7.86

- Above 50,000 gsf - - \$2.00 - - - \$2.86 - - \$5.71

- **Example: 100,000 gsf building: Silver: \$200,000; Gold: \$286,000; Platinum \$571,000**

■ Business Energy Tax Credit (BETC)

- BETC offers projects that incorporate energy conservation, efficient equipment and renewable energy systems a 35 percent, five-year tax credit or a 28 percent cash "pass through" option through your service utility or lender. Office buildings, stores, apartment buildings and other businesses may be eligible.

■ Small Scale Energy Loan Program (SELP)

- Low-interest, fixed-rate, long-term loans for any qualified building project that invests in energy conservation, renewable energy and alternative fuels. Individuals, businesses, schools, special districts, tribes and local, state or federal government agencies are eligible. In addition, schools and governments are eligible for an individual energy analysis and engineering study.



PORTLAND

- **STAKEHOLDERS**

- Originally there were 160 local developers, architects, engineers, affordable housing providers, advocacy groups, and city employees who collaborated to form G/Rated.

- **MARKETING**

- Portland G/Rated has a highly interactive and fun/easy to use web-interface with a lot of information and contacts for their extensive incentive programs. They also hold events on a regular basis including tours of green building in the city.



AUSTIN

- Administrator: Austin Energy (Austin public utility)
- Focus: Residential, commercial, multifamily and municipal
- website: www.ci.austin.tx.us/greenbuilder
- Contact: 512-505-3703 or Jill.Mayfield@austinenergy.com
- HISTORY: The Austin Green Building Program was initiated in 1991, evolving from the Austin EnergyStar Program created in 1985. Its early focus was on residential building and expanded in 1993 to include commercial construction and Municipal Guidelines for city buildings. The program has recently begun to focus on multifamily construction.
- STRUCTURE: The program is run by Austin Energy, the city's public electric utility. Most of the funding is provided by Austin Energy and is supplemented by the city's water utility, environmental, and solid waste departments. The Program has a staff of 14 with expertise in green building.
- MEMBERSHIP: The program has approximately 90 members representing various building industry sectors. A standard membership is available for builders and architects, and an associate membership is available for manufacturers, suppliers, and real estate agents. Membership is free, but new members are required to be working on a project in the Austin Energy service area at the time they join, attend a "Green Building Basics" course within one year of joining, and attend two of the free technical seminars offered by the program each year.
- RATING SYSTEMS: are available to members for residential, commercial and multifamily construction. By the year 2000, the program rated 1,800 homes, 1,400 apartment units, and 10 commercial buildings, with consultation on 85 other projects.



AUSTIN

✦ PRODUCTS AND SERVICES:

- ✦ Consulting: The staff provides technical and marketing assistance to participating builders, technical analysis of plans, and construction document reviews.
- ✦ Publications: Sustainable Building Sourcebook, fact sheets on green building, Green by Design interactive CD, Municipal Guidelines, and monthly newsletter.
- ✦ Publicity: Marketing support for members, directory of Green Building professionals, and co-sponsorship of the Cool House Tour showcasing green buildings in Austin.
- ✦ Education: Conferences and monthly training seminars on various green building aspects, resource library, and presentations available for interested groups.

- ✦ **FUNDING**: The program provides information on Austin Energy and Municipal funding programs and helps to coordinate rebates for commercial construction.

- ✦ **LEGISLATIVE INITIATIVES**: The program has worked with city departments and industry associations to develop Municipal Guidelines for green buildings that are mandatory for all new city construction. The guidelines can also be used voluntarily in private sector construction.

PROGRAM GOALS

- Create a commonly accepted definition and language for sustainable building for the region;
- Create a vision/message for sustainable building that will motivate people;
- Increase demand for sustainable building services/products/projects by increasing awareness and understanding, and by providing incentives; and
- Increase the supply of sustainable building services/products/projects by providing industry professionals with information, tools, resources, incentives, and rewards to enable them to undertake sustainable building practices.



TRANSFERRABLE STRATEGIES



- Leadership and shared vision
- Policy and standards
- Analytical models
- Incentives
- Awards program
- Education and training



TRANSFERRABLE STRATEGIES: Leadership and Shared Vision

- Leadership should be both from key stakeholders (Mayor & BRA) but should also be heavily invested in creating a shared vision – within city staff and departments and with the private sector.
- Collaborate w/state and regional efforts where appropriate (DEP waste management)
- Marketing and communication are absolutely critical
- Implementation must continue to rely on shared vision and collaboration of private and public sector stakeholders.
- Baseline: City must understand where current practices fail or are less than perfect – improving on those will automatically draw support and interest. Most important to start from an understanding of “Desired Outcomes” and make sure that all policies and programs support and lead directly to those outcomes.
- Programs that do not address systematic transformation in both public and private sector do not effectively achieve their goals.



TRANSFERRABLE STRATEGIES: Leadership and Shared Vision

- **City lead by example!** City must 'walk the talk' (clearly publicize ongoing efforts that may not be known widespread). Critical to incorporating 'life cycle costing' into policies and actions. Review city budget analysis and create new financial tools as needed.
- Develop and maintain effective resources for city departments and community to access as well as resources for the development of the program.
- Pilot programs/showcase and demonstration projects to get public support and boost learning curve among city staff and private sector.
- Intentionally leverage existing programs (Backstreets, DND efforts, etc.)
- Improve city O&M practices – broaden scope (food compost, water management)



TRANSFERRABLE STRATEGIES: Clear Policy

- Develop guidelines for sustainable design and construction that will serve as a benchmark and design tool for the marketplace.
- City wide policy and or ordinances (understood in a strategic planning context) such as: deconstruction and salvage ordinance, indoor air quality protocol, energy water efficiency upgrades on sale of commercial or residential – reduction of toxic substances, green space
- Create a code task force to examine and future code adjustments. Build in flexibility and intentional feedback mechanisms that are not cumbersome
- Coordinate w/larger transportation efforts
- Common understanding – reduce or eliminate uncertainty.
- Develop clear RFP language for developments
- Make sure review/permit process supports and enables policy and not works against it.



TRANSFERRABLE STRATEGIES: Analytical Models



- Identify and promote the use of analytical models that will encourage, guide and assess the financial and performance comparisons of sustainable design and construction. Tie these to policies and permitting.



TRANSFERRABLE STRATEGIES: Incentives

- Sustainable mortgages: build on energy efficient programs – key to engage real estate appraisals and brokers
- Permit process, reduce carrying costs and implement performance based permit pricing
- Address zoning issues and incentives where appropriate: FAR, etc. (Boulder residential requires an increase in green requirements proportional to square feet of project – reducing impact is the goal)
- Green building ombudsman or “green team” to expedite projects – intervene early in the process before Review– clear communication w/decision makers to avoid conflict and maintain certainty. Cross-departmental stakeholders: i.e., Environment and ISD
- Implement a tiered rate structure for system development charges related to performance Measure to reduce external development impacts
- Floor area bonuses if in compliance w/green criteria, or if contributing to specific facilities or amenities valued by the city (roof top gardens, water infrastructure) this can help a shift towards sustainable infrastructure if clear vision of 100 year plan is the target.
- Consider tax abatement or tax shifting
- Stimulate the “green” market, for development but also for goods/products
- Educate appraisers, insurance, brokers – to move faster on ‘green’ properties and lease up/retain tenants
- Green Building Fund - partner w/ lenders and financial institutions
- city sponsored buyers club, green equipment lease program, partner w/utilities and other



TRANSFERRABLE STRATEGIES: Education and Training

- **Public and Private Sector Education and Training.**
- Develop a curriculum and conduct training to educate key sectors of the building industry on sustainable building and the shared vision for the City. Training sessions targeted at each sector, potentially offer some level of “free assistance”
- Training program for City Staff in each department tailored to their context and needs. Include a “train the trainers” program.
- Effort to “mainstream” products or techniques not yet adapted (chicago’s green roof program)
- Take into consideration stakeholder roles and address those in trainings: ISD wants to be proactive
- Partner with other existing or new training/education and outreach programs to leverage them.
- Develop a comprehensive public education and communication program, based on the shared vision, to build support for sustainable building with the general public.
- Market assessment, general outreach: grassroots public officials, point of purchase, public schools, educational systems, neighborhood forums (BRA process), incubators of green business, support green business products



TRANSFERRABLE STRATEGIES: Award Programs



- Develop an awards program that focuses on sustainable, holistic approaches to building projects.
- Public recognition brings out healthy competition feeds into marketing efforts. Also public education. Coordinate/partner w other organizations
- Target audiences – develop appropriately and outreach to stakeholders, etc.





PROGRAM DEVELOPMENT

- Secure a “home” and multiple years of funding arrived at through strategic planning effort. Identify resources to raise sufficient funding to implement the Plan.
- Assign some type of coordinator to lead the implementation under the guidance of a steering committee of public and private sector stakeholders
- Generate broader awareness and support of the Plan, and identify potential participants as the program continues
- Identify potential organizations to provide leadership on each strategy identified in the plan and collaborate wherever possible to increase leverage
- Build into the program adequate Feedback mechanisms
- Figure out how (and what) you want to measure. Resources as well as to gauge your success and build that in to the systems of development